

What is claimed is:

1. An electronic device for which at least two different types of batteries can be selectively used as a power source, said electronic device comprising:

5 a battery chamber, in which at least two battery packs of the same type each having a shape interchangeable with two cylindrical cells of the same type can be accommodated so that either said two battery packs or two sets of said two cylindrical cells can be selectively accommodated in
10 said battery chamber, wherein each of said two battery packs includes a positive terminal and a negative terminal which are formed on only one end of said each battery pack, and wherein each of said two cylindrical cells includes a positive terminal and a negative terminal which are
15 respectively formed on opposite ends of said each cylindrical cell;

first through fifth contacts, positioned alternately between opposite ends of said battery chamber, in a longitudinal direction of said cylindrical cells or
20 battery packs which are accommodated in said battery chamber, wherein said first through fifth contacts connect said two sets of said two cylindrical cells in series in a case where each of said two sets of said two cylindrical cells is accommodated in said battery chamber in the
25 correct direction, and wherein in the case where said two

battery packs are accommodated in said battery chamber,
said third contact is in electrical contact with said
negative terminal of one of said two battery packs and said
positive terminal of the other of said two battery packs
5 while said first contact and said fifth contact are in
electrical contact with said positive terminal of said one
of said two battery packs and said negative terminal of
said other of said two battery packs, respectively;

two detection switches which are turned ON only when
10 said two battery packs are accommodated in said battery
chamber in the correct direction, respectively;

a voltage detector capable of detecting each of a
first voltage between said first contact and said second
contact, a second voltage between said second contact and
15 said third contact, a third voltage between said third
contact and said fourth contact, a fourth voltage between
said fourth contact and said fifth contact, a fifth voltage
between said first contact and said third contact, and a
sixth voltage between said third contact and said fifth
20 contact; and

a controller which allows either said two sets of said
two cylindrical cells or said two battery packs that are
accommodated in said battery chamber to be used as said
power source only in one of the following two cases:

25 a first case where both said two detection switches

are ON while it is determined via said voltage detector that said fifth voltage and said sixth voltage are substantially the same as each other, and

a second case where both said two detection switches
5 are OFF while it is determined via said voltage detector that each of said first voltage, said second voltage, said third voltage and said fourth voltage is greater than zero volts and that said first voltage, said second voltage, said third voltage and said fourth voltage are
10 substantially the same as each other.

2. The electronic device according to claim 1, further comprising:

a warning device; and

a backup battery provided independently of said two
15 sets of said two cylindrical cells and said two battery packs,

wherein, in a case other than said first and second cases, said controller issues a warning that inappropriate batteries are accommodated in said battery chamber via said
20 warning device while using said backup battery as a power source, and prohibits said inappropriate batteries from being used as a power source.

3. The electronic device according to claim 2, wherein said warning device comprises a display device,
25 and

wherein said controller drives said display device to indicate said warning in said case other than said first and second cases.

4. The electronic device according to claim 1,
5 wherein said each cylindrical cell comprises an AA-sized cell, and wherein said each battery pack comprises a CR-V3 battery.

5. The electronic device according to claim 4,
wherein each of said two detection switches comprises a
10 movable switch portion which projects into said battery chamber, said movable switch portion being pressed by a side surface of associated said CR-V3 battery when said associated CR-V3 battery is inserted into said battery chamber.

15 6. The electronic device according to claim 1, wherein said electronic device comprises a camera.

7. The electronic device according to claim 1,
wherein said battery chamber is partitioned into a first partition and a second partition, in each of which either
20 said two cylindrical cells or one of said two battery packs can be accommodated,

wherein said electronic device comprises a battery chamber lid for opening and closing said battery chamber,
and

25 wherein said second contact and said fourth contact

are fixed to an inner surface of said battery chamber lid in a manner to face said first partition and said second partition, respectively, in a closed state of said battery chamber lid.

5 8. The electronic device according to claim 6, wherein said battery chamber is formed in a grip portion of said camera.

 9. The electronic device according to claim 5, wherein two of said CR-V3 batteries are accommodated in
10 said battery chamber with respective grooves portions of said two of said CR-V3 batteries facing each other.

 10. An electronic device for which at least two different types of batteries can be selectively used as a power source, said electronic device comprising:

15 a battery chamber, in which at least two battery packs of the same type each having a shape interchangeable with two cylindrical cells of the same type can be accommodated so that either said two battery packs or two sets of said two cylindrical cells can be selectively accommodated in
20 said battery chamber; and

 a detector for detecting whether said two sets of said two cylindrical cells or said two battery packs are accommodated in said battery chamber.

 11. The electronic device according to claim 10,
25 wherein said each cylindrical cell comprises an AA-sized

cell, and wherein said each battery pack comprises a CR-V3 battery.

12. An electronic device for which at least two different types of batteries can be selectively used as a power source, said electronic device comprising:

a battery chamber, in which at least two battery packs of the same type each having a shape interchangeable with two cylindrical cells of the same type can be accommodated so that either said two battery packs or two sets of said two cylindrical cells can be selectively accommodated in said battery chamber;

a voltage detector capable of detecting a voltage for each of said two sets of said two cylindrical cells or said two battery packs which are accommodated in said battery chamber; and

a determining device which determines that different types of batteries are accommodated in said battery chamber in the case where all of said voltages detected by said voltage detector are not substantially the same.

13. The electronic device according to claim 12, wherein, in a case where said determining device determines that said different types of batteries are accommodated in said battery chamber, said different types of batteries are prohibited from being used as a power source.

14. The electronic device according to claim 12,

wherein said each cylindrical cell comprises an AA-sized cell, and wherein said each battery pack comprises a CR-V3 battery.